Quality Control

						•						DQA:	Dat	te:	
NCR:	/es	/ No				<b>WORK ORDER NON-C</b>	100	NFOR	MANCE / UP	DATE					
									•		QA Cl	osed:	Dat	te:	
Work Orde	ar.					DISPOSITION				AGAINST D	PARTN	ΛENT,	/PROCESS		
Part No			Rework Scrap Use-as-is Work Order Update			Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	Re		Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other			
Root					Descri	ption of work order update	П	nitial	Ac	tion	Sigr	ո &			
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desc	ription	Da	te	Verification	n	QC Inspector
Doc/Data															
Equip/Tooling					1										
Operator															
Material															
Setup															
Other															
Process															
Supplier									1		1				
Training															
Unapproved				<u> </u>						•					
	•					F.	AUL	T CATE	GORY						
Landi	ng G	iear				General		_			_		_		
		Bending				Bend		Grain			Ovaliz	ed			Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	ire		Over/l	Under	tolerance		Temperature/Cure
	Cracks					Broken/Damaged		Inspect	ion Incomplete		Part In	corre	ct		Weld

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Wrong Stock Pulled

Other

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

September-23-				^1()/	/:308^							Page 2
Item ID: Revision ID:	D3012-1			Accept	*N900	040	100	)*	Setup	Start	*N:	S1*
Item Name:	Decal		•							Stop	*N	S2*
Start Date:	9/23/13	Start Qty: 12.00	*12*		Cust Item I	D:						
Required Dat	<b>e:</b> 9/23/13	<b>Req'd Qty:</b> 12.00	*12*		Customer:							
Reference:							_		D	Stant		
Approvals:	Process P	lan:	Date:	Tooling:	D	ate:			Run	Start	7	R1*
	QC:		Date:	<b>SPC (Y/N):</b>	Date:					Stop	*N	R2*
Sequence ID/ Work Center	ID	Operation Description Identify as per dwg & Sto	ock Location; ST 06	Set Up/ Run Hours  3 0.00	Tool ID	Tool#	Plan Code	Acce <sub>l</sub> Qty	pt Re Qt		Reject Number	Insp. Stamp
*130* Packaging		Memo		0.00				/2x	<del></del>			~ <b>\$</b>
Packaging									,			
140		QC21- Final Inspection -	Work Order Release	0.00				W.	Rr	n 13	1/10/01	7.
*140* QC Quality Control		Memo		0.00			i		<del></del>			

NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
											QA Closed:	Date:	0
Work Order:				DISPOSITION	AGAINST DEPARTMENT/PROCESS  Skid-tube Crosstube Water Jet Engineering								
Part No				Rework Scrap Use-as-is Work Order Update	Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing  Large Fab Composite			Prod Rec/Stor	Engineering Quality Other				
Root			<u> </u>	!	Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause	ŀ	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
						F	AUL	T CATE	GORY				
Landi	_					General	_	1			3	<u></u>	1 .
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion			Tube	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/U enance eled	Jnclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
	Turning Sequence		Finish	1	Out of Sequence								

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio





DESIG	N P	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHEC	(ED	APPROVED	DRAWING NO.	REV. A
	4	de	D3012 SHEET	1 OF 1
DATE			TITLE	SCALE
 01.0	3.30		DECAL	1:1
Α		01.03.30	NEW ISSUE	



- POINT A -SWL=300lb/136kg DO NOT USE WITH POINT B P/N D3012-1

D3012-1

- POINT B -SWL=500lb/227kg DO NOT USE WITH POINT A OR C P/N D3012-3

D3012-3

- POINT C -SWL=300lb/136kg DO NOT USE WITH POINT B P/N D3012-5

D3012-5

MATERIAL: WHITE LETTERS ON BLACK ADHESIVE BACK

MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP

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# Studio de Lettrage 210 Main Street W

Hawkesbury, Ontario K6A 2H6

# **INVOICE**

Invoice No.:

20967

Date:

09/30/2013

Ship Date:

Page:

Re: Order No.

WO10932

Sold to:

**Dart Aerospace Ltd** 

1270 Aberdeen Hawkesbury, Ontario K6A 1K7

Ship to:

Dart Aerospace Ltd

Hawkesbury, Ontario

82500 7651 RT0001

tem No	s onits	Quantity	- Descapilo	n <u>a a a a</u>	ax Unit Price	Amount
77 /		24 1	stickers-D3012-1P set up stickers-D3671-1P set up stickers-D3997-25P set up PO# 21490		2.0833 50.0000 1.0417 25.0000 2.5000 50.0000	25.00 50.00 25.00 25.00 25.00 50.00
			H - HST 13% HST			26.00
						·
			·			
· · · · · · · · · · · · · · · · · · ·	etal sugueta					
Studio de Lettrage Shipped By:	HST: #8250076511					
Comment:	riachily r	willing.			Total Amoun	226.00
Sold By:						

****Certificate o	Conformity****							
Gustomer:	10							
Purchase Order #: Packing Slip #:	Part #: Serial #:							
21490 W049632  Description: D3012-1P:  Styres D3671-1P	Quantity: 86 Total.							
Certification:								
We hereby certify that:								
The above the listed items were manufact accordance with applicable drawings and/	ured, repaired and/or inspected in or specifications;							
All work was accomplished in accordance     Purchase Order;	All work was accomplished in accordance with the Dart Aerospace     Purchase Order;							
3. Results of all inspections, chemical or physical tests, as well as other evidence, which shows the acceptability of raw materials, parts and/or assembly								
components are on file and available for in	spection at any time.							
Authority:								
Avery								
APPROVAL: KCILEN STE. Mari	DATE:							
Signature: Lan Ahi								
Title: Project Coordinate	e Oct-2,2013.							

# PRODUCT DATA SHEET



# Averv® IPM™ 2031

issued: 01/04/2005

Introduction

Avery<sup>®</sup> IPM™ 2031 is a high quality pressure-sensitive vinyl film, designed for use on wide format inkjet printers. Avery<sup>®</sup> IPM™ 2031 has excellent printing properties, allowing crisp print quality with bright and vibrant colours. Avery<sup>®</sup> IPM™ 2031 offers rapid ink drying and a water-resistant material. It combines good adhesion during its life and easy removal afterwards.

Description

Facefilm:

80-micron premium white calendered, topcoated vinyl.

Adhesive:

removable, acrylic based

Backing paper: one side coated kraft paper, 140 g/m<sup>2</sup>

## **Features**

- Excellent printability
- Vibrant and bright colours
- Crisp print quality
- Spray water resistant wit specific pigmented inks
- Good adhesion, excellent removability
- Warranty on outdoor durability

# Recommendations for use

A wide variety of full-colour graphics for indoor - and **short/medium term outdoor** applications such as posters, murals, displays, exhibition stands, vehicle graphics etc. Avery<sup>®</sup> IPM™ 2031 is suitable for application to a wide variety of substrates and will remove cleanly for up to 1 year after application.

IPM media should be handled with care as any surface contamination may affect the print quality. Media should be processed in an environment of 15-25°C and 30-70% relative humidity. After drying, the finished prints should be wrapped in polyethylene film and despatched flat or rolled with the printed side facing outwards. To protect prints against water, UV/light and abrasion, overlamination with a clear film is recommended. For specific details of Avery® DOL combinations, refer to "Technical Bulletin 5.3. Recommended combinations of Avery® Overlaminates and Avery® Digital Print Media"

Always test your combination of Avery<sup>®</sup> IPM™ medium, inkjet printer and inks prior to commercial use.

Compatibility

Avery<sup>®</sup> IPM<sup>™</sup> 2031 is compatible with a broad selection of inkjet printers, when printing with pigmented, water based inks. For specific details refer to "Technical Bulletin 5.6 Avery Dennison Inkjet Print Media - Printer compatibility".

**Durability:** 

Avery<sup>®</sup> IPM<sup>™</sup> 2031 is warranted for outdoor use in conjunction with pigmented outdoor inks from HP, Encad and Colorspan. The warranted period varies from type of application and type of overlaminate from 18 months up to 5 years. For full details, see our Avery<sup>®</sup> IPM<sup>™</sup> Outdoor warranty.





# Physical properties

Features	Test method <sup>1</sup>	Results
Caliper, facefilm	ISO 534	80 µm
Gloss	ISO 2813, 20°	1%
Dimensional stability	DIN 30646	0.3 mm. max
Adhesion, initial	FINAT FTM-1, stainless steel	180 N/m
Adhesion, ultimate	FINAT FTM-1 stainless steel	260 N/m

	, , , , , , , , , , , , , , , , , , ,	200 14111
Flammability		Self extinguishing
Accelerating ageing	DIN 53587, 500h exposure	No negative impact on film

		Performance
Shelf life	Stored at 22° C/50-55 % RH	2 years
Removability		up to 1 year

Not when applied to: Nitro collulose pain	te ARS Dolucturon	a partain tunes of DVC
Not when applied to: Nitro-cellulose pain	(S, ADS, PUlystylen	e, certain types of PVC

Durability <sup>2</sup>	Overlaminated with DOL 4300	5 years
•	Overlaminated with DOL 1000, DOL 1100	
	with overlaps	3 years
en e	Overlaminated without overlaps	
	for static applications only	2 years
	Without overlaminate and used for static,	

Only when printed with ENCAD GO, HP and Colorspan pigmented inks and when properly applied in accordance with our application instructions. Only applicable for vertical exposure.

Non-abrasive application ONLY

# Temperature range

# FeaturesResultsApplication temperatureMinimum: +10°CService temperature-20°C to +80°C

### Important

Information on physical and chemical characteristics is based upon tests we believe to be reliable. The values listed herein are typical values and are not for use in specifications. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use.

should independently determine, prior to use, the suitability of this material to their specific use.

All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of these Conditions, the English version shall be controlling.

### Warranty

Avery® branded materials are manufactured under careful quality control and are warranted to be free from defect in material and workmanship. Any material shown to our satisfaction to be defective at the time of sale will be replaced without charge. Our aggregate liability to the purchaser shall in no circumstances exceed the cost of the defective materials supplied. No salesman, representative or agent is authorised to give any guarantee, warranty, or make any representation contrary to the foregoing.

All Avery® branded materials are sold subject to the above conditions, being part of our standard conditions of sale, a copy of which is available on request.

# 1) Test methods

More information about our test methods can be found on our website.

### 2) Durability

The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased.





www.avervoraphics.com

18 months